

ECE 345 / ME 380: Introduction to Control Systems

Collaborative Quiz #2 Grading Sheet

Dr. Oishi

September 24, 2020

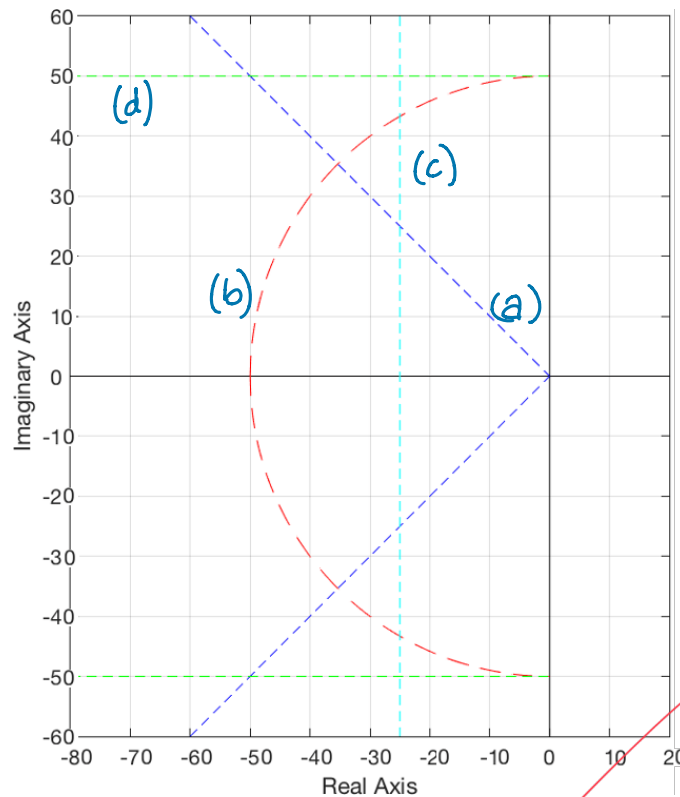
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This quiz is open-note and open-book. Computational tools (Matlab, calculators) are allowed. No partial credit will be awarded. For each of the questions, clearly write the correct answer.

In-Class Questions

1. A, B, C
2. B, D
- 3.

- (a) Damping ratio $\zeta = 1/\sqrt{2}$
- (b) Natural frequency $\omega_n = 50$
- (c) Settling time $T_s = 0.16$ seconds
- (d) Peak time $T_p = \pi/50 \approx 0.06$ seconds



4. A, C
5. $K = 50\sqrt{2}$ is the most suitable response because
 $K = 40$ does not meet the settling time
requirement.

Statement of Effort

By signing below, I pledge that I have written this quiz as per the indicated instructions, and fully participated in the group.

| | | |
|--------------|--------------------|-----------|
| Nathan Burt | burt+n@unm.edu | |
| Name | Role | Signature |
| Noah Jackson | njackson18@unm.edu | |
| Name | Role | Signature |
| David Kirby | davidkirby@unm.edu | |
| Name | Role | Signature |

Leader: Charged with keeping the group on task to complete the allotted work.

Recorder: Keeps an organized written record of the group's ideas and copies the group's answers to the grading sheet.

Monitor: Tasked with monitoring all group member's learning, and informing the leader when the pace is too slow / too fast and impairing group learning.